Algebra 2 Name_____ ID: 1

11.1 Counting Outcomes

Period____

Find the number of possible outcomes in the sample space. SHOW YOUR CALCULATION WORK PLEASE.

1) A hot dog stand offers both small and large hot dogs. Each hot dog can be ordered plain or with ketchup.

2) A football player attempts three passes in overtime. Each pass attempt results in a completion, an incompletion, or a turnover.

3) A sandwich shop has three types of sandwiches: ham, turkey, and chicken. Each sandwich can be ordered with white bread or multi-grain bread. Each sandwich comes with a choice of potato salad, chips or coleslaw.

4) The band must decide when to meet for a practice. The possible days are Tuesday, Wednesday, or Thursday. The possible times are 3, 4, or 5 p.m.

5) A new car is available in a sedan model and a hatchback model. It is available in red, white, green, black, and yellow.

6) You flip a coin and then roll a six-sided die.

7) A spinner can land on either red, blue, green, yellow, purple, or orange. You flip a coin and then spin the spinner.

8) A jewelry store sells gold and platinum rings. Each ring is available in five styles and is fitted with one of eight gemstones.

9) You flip a coin nine times.

10) A padlock's combination is five digits long.

State if each scenario involves a permutation or a combination. Then find the number of possibilities.

11) Mofor and Maria are planning trips to seven countries this year. There are 11 countries they would like to visit. They are deciding which countries to skip.

12) A team of 11 dodgeball players needs to choose a captain and co-captain.

13) A team of 18 lacrosse players needs to choose two players to refill the water cooler.

14) The batting order for eight players on a 9 person team.

15) There are 15 applicants for four jobs: Computer Programmer, Software Tester, Manager, and Systems Engineer.

16) There are 20 applicants for three Manager positions.

17) There are 250 politicians at a meeting. They each shake hands with everyone else. How many handshakes were there?

18) A group of 25 people are going to run a race. The top three runners earn gold, silver, and bronze medals.

19) You are setting the combination on a three-digit lock. You want to use the numbers 624 but don't care what order they are in.

20) Selecting which nine players will be in the batting order on a 12 person team.